

Tourism

Introduction

Tourism, as defined by Webster's¹ is "Travel, especially when regarded as a source of income for a country, business, etc." Tourist travel has a different purpose than other types of trips, and travel patterns differ significantly. Tourist trips are frequently more indirect than other types of trips because tourists often take lengthy or even circular routes and are less inclined to take the most time effective route keeping to well known roads (e.g., roads that are located on regional maps), or scenic routes.

Tourist travel is also referred to as recreational travel; therefore, a distinction must be made between tourist or recreational *travel* and recreational *vehicles* (RV's). RV's are one way of participating in tourist travel; the family car, a personal light duty truck, or a bicycle may also be used as other forms of tourist travel. This chapter deals with all forms of motorized tourist travel, but because RV's are large vehicles and impact roadway visibility as well as perception – particularly the driver's perception of maneuverability and passing safety – RV's are specifically discussed in this chapter. Non-motorized tourist travel, as in the case of bicycle tours, is popular but is not examined here. However, the importance of non-motorized travel should not be underestimated. Many people come to the Region explicitly to bicycle or to hike. The appeal of the North Olympic Peninsula is its combination of natural features, cultural resources, good weather, small high quality communities and easy access to camping, hiking and outdoor activities as well as experiencing different cultures.

Because the PRTPO area is almost completely surrounded by water, ferries play an important role in the PRTPO's overall transportation system. The Washington State Ferry System (WSF) links the Kitsap and Olympic Peninsulas to the Central Puget Sound region and neighboring island communities, by operating both combination vehicle/passenger vessels and passenger-only vessels on routes within the peninsula service area. Ferry terminals can be seen as an extension of the network of transit routes and park & ride lots within the PRTPO area, as well as an extension of the PRTPO roadway system.

The most direct link from the Peninsulas to the Central Puget Sound Region is via the ferry system. Auto/passenger ferry service to greater Puget Sound in Kitsap County is provided via Kingston, Bainbridge Island, Bremerton and Southworth. In addition, passenger-only service is provided between Seattle and Bremerton and between Seattle and Vashon Island. The latter route allows for transfers between the Southworth auto/passenger ferry. Additionally, WSF provides ferry service to Whidbey Island via the Port Townsend (Jefferson County) – Keystone route and the Mukilteo – Clinton route.

In general, the ferry routes are part of a well traveled "tourist loop" that runs from Seattle, along the North Cascades Highway, to the San Juan Islands, and the Olympic and Kitsap Peninsulas. In the summer months, on spring and fall weekends as well as many holidays, long waits for available ferry capacity are not uncommon.

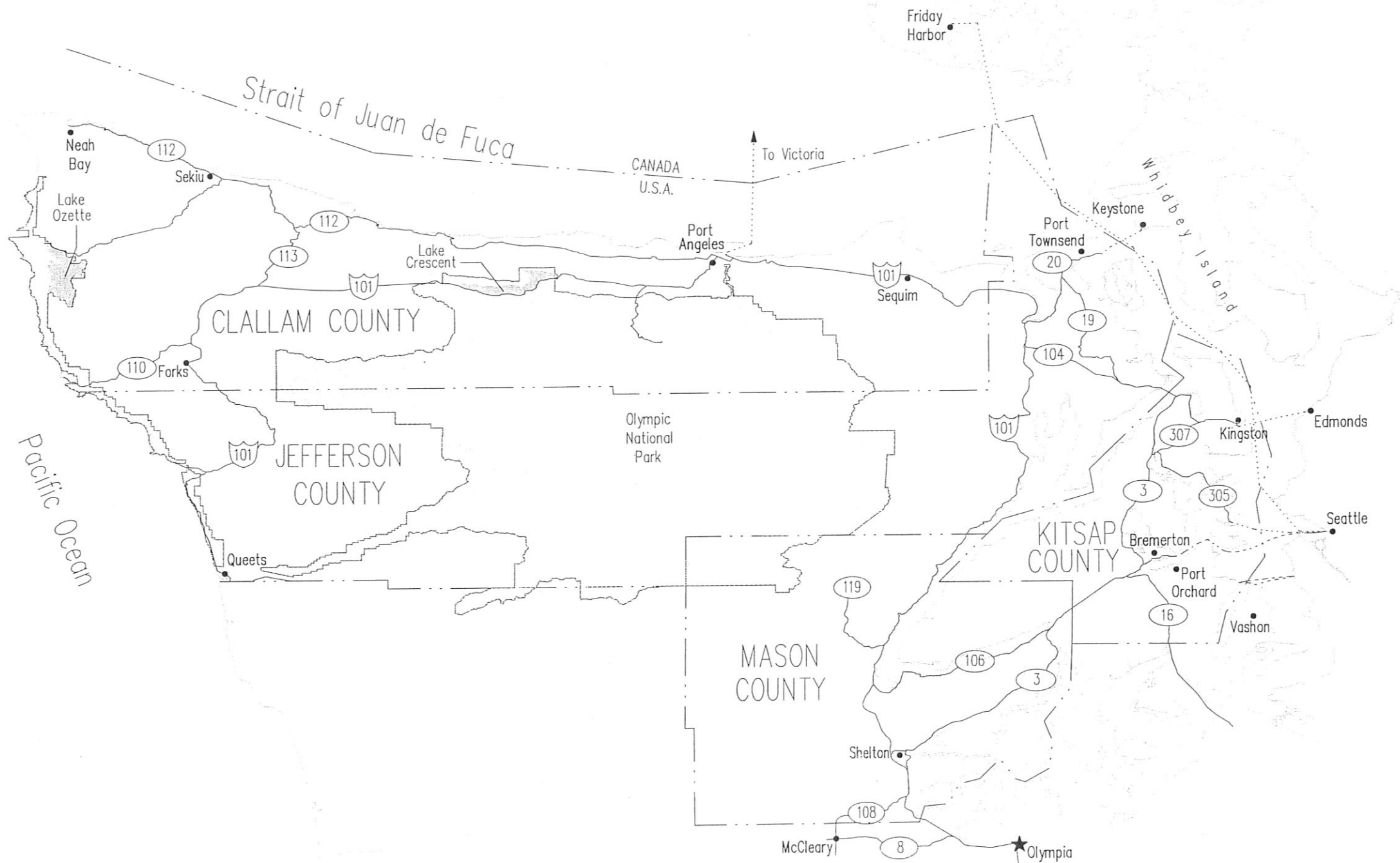
The chapter is comprised of four main sections, which are listed below:

- Historical Trends and Existing Conditions
- Impacts on Regional Road System
- Projections of Tourism increase on regional roadway system
- Recommendations for Future Analysis

Historical Trends and Existing Conditions

Figure 7.1 depicts the study area, main roadways and some of the numerous tourist attractions in the Peninsula RPTPO area. As shown on the map, these main travel routes are classified as State Routes. The major access highway to *Olympic National Park* is the northern portion of US-101 near Sequim and Port Angeles.

¹ Webster's New World Dictionary, Third Edition, Simon & Schuster, Inc., 1994



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Figure 7.1:
Study Area &
Tourist Corridors

Also shown in Figure 7.1 are the designated "Tourist Corridors" as adopted by the PRTPO Highways/Level of Service/Tourism Subcommittee. These identified segments consist of roadways that serve as primary tourist conduits providing access to/from major tourist areas. They include: Highway 101, SR-104, SR-3, SR-20, SR-106, SR-112, SR-16, and SR-305.

The Highway/Level of Service/Tourism Subcommittee previously developed a set of criteria to identify Tourist Corridors in the Region. The Subcommittee set the following criteria for Regional Tourist Corridors.

1. The responsible jurisdiction must determine the roadway to be a primary tourist conduit providing access to/from tourist attractions or areas. The other members of the Peninsula RTPO Technical Advisory Committee must concur with the determination.
2. The roadway typical section must conform to WSDOT design standards for principal arterials, minor arterials and major collectors; and have at a minimum 8-foot wide shoulders. (Note: Those segments of designated Tourist Corridors that do not currently meet the geometric requirements will be listed as segments containing deficiencies on the project needs inventory.)

With an 8-foot minimum shoulder, the Tourist Corridor designation provides enough roadway width for large commercial vehicles and large recreational vehicles to pull over allowing other vehicles to pass.

It should be recognized that, in addition to the roadways listed above, many of the region's other roads also serve as tourist access routes (roadways providing direct access to specific tourist attractions and local tourist/recreational areas). Examples of tourist access routes include those roads leading to the Lake Cushman, Hurricane Ridge and Hoko/Ozette Recreational Areas, as well as SR-10 to LaPush.

TOURIST ATTRACTIONS

The Olympic Peninsula contains a wide variety of tourist attractions, ranging from national parks and recreation areas to river access, fishing areas, resorts and historic sites. These tourist attractions exist throughout the PRTPO area. Figure 7.2, includes only a partial listing of recreational sites in the area. This figure graphically demonstrates the wide dispersion of recreational areas in the PRTPO Region. The *Olympic National Park* on the Olympic Peninsula is the largest tourist attraction.

Both the *Olympic National Park* and eight additional recreational sites outside the *Park* were analyzed. Figure 7.2 depicts those recreational sites that were analyzed for this chapter, including those inside and outside of the *Olympic National Park* Boundaries.

OLYMPIC NATIONAL PARK

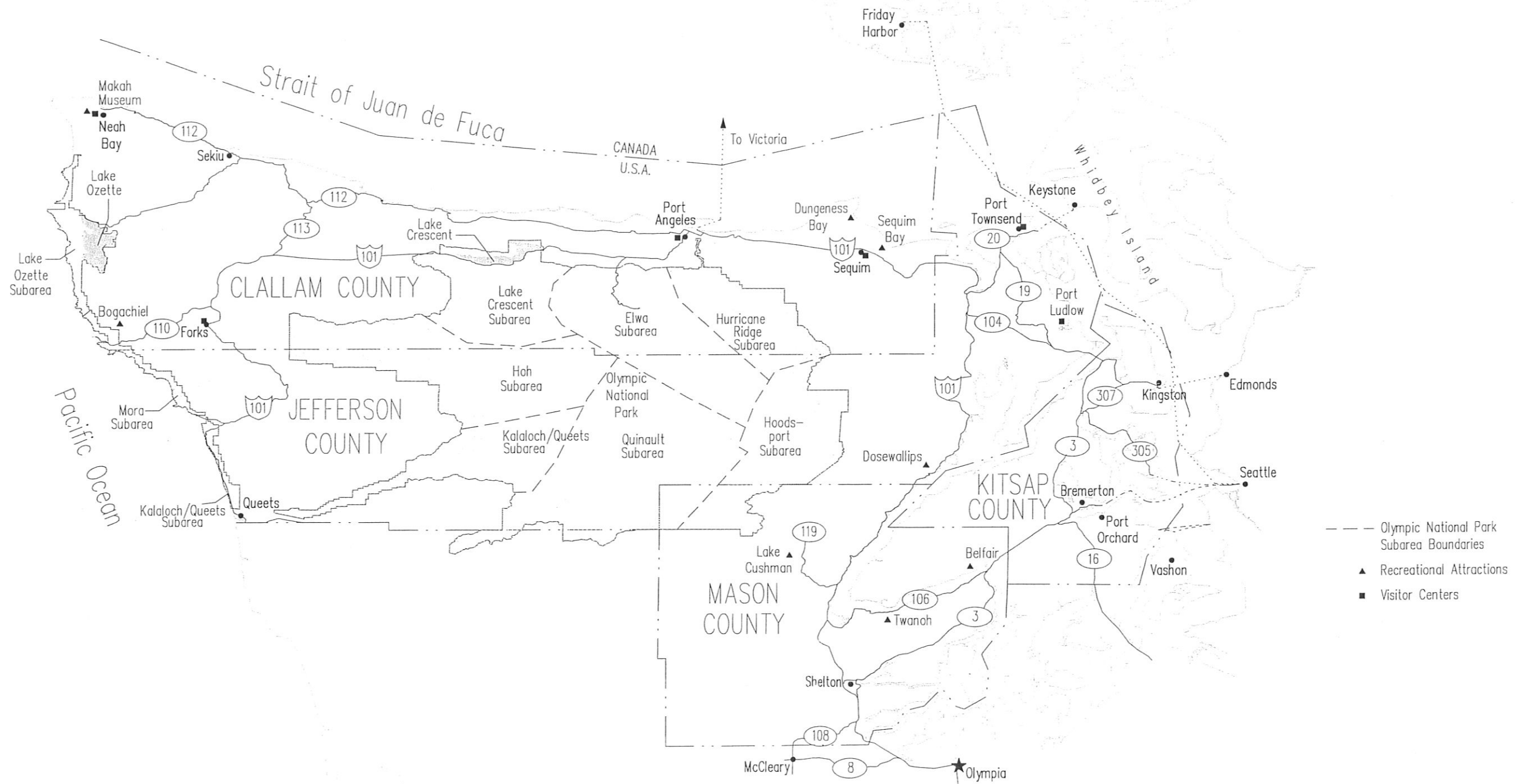
Because of its size, the *Olympic National Park* is informally divided into subareas according to various geographic boundaries including lakes, streams, and mountain ranges. The subareas are listed below.

- Elwha Subarea
- Hoh Subarea
- Hoodsport Subarea
- Hurricane Ridge Subarea
- Kalaloch Subarea
- Lake Crescent Subarea
- Lake Ozette Subarea, along the Pacific Coastline
- Mora Subarea, along the Pacific Coastline
- Quinault Subarea

In 1998, over four and a half million (4,621,829) people visited the *Park* and over 53% of those visitors went to the Lake Crescent Subarea. Since 1980, the annual number of visitors to *Olympic National Park* has almost doubled (94%). Table 7.1 depicts the number of visitors and the overall percentage of visits to each of the subareas in the *Olympic National Park*.

After the Lake Crescent Subarea, Kalaloch and Hurricane Ridge are the second and third most frequented subareas, but each have less than one-fifth the number of visitors as Lake Crescent (each approximately 10% of the total trips).

The visitor growth rates for the different subareas indicate that the Lake Ozette Subarea has the highest visitor growth rate (400% since 1980). However, because of its smaller base number (22,377 people in 1980), this higher growth rate translates into only an additional 89,206 visitors. In contrast, the Lake Crescent Subarea has grown by 129% (since 1980) but has seen an increase of more than 1,395,712 visitors.



- Olympic National Park Subarea Boundaries
- ▲ Recreational Attractions
- Visitor Centers

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Figure 7.2: Recreational Sites Analyzed			
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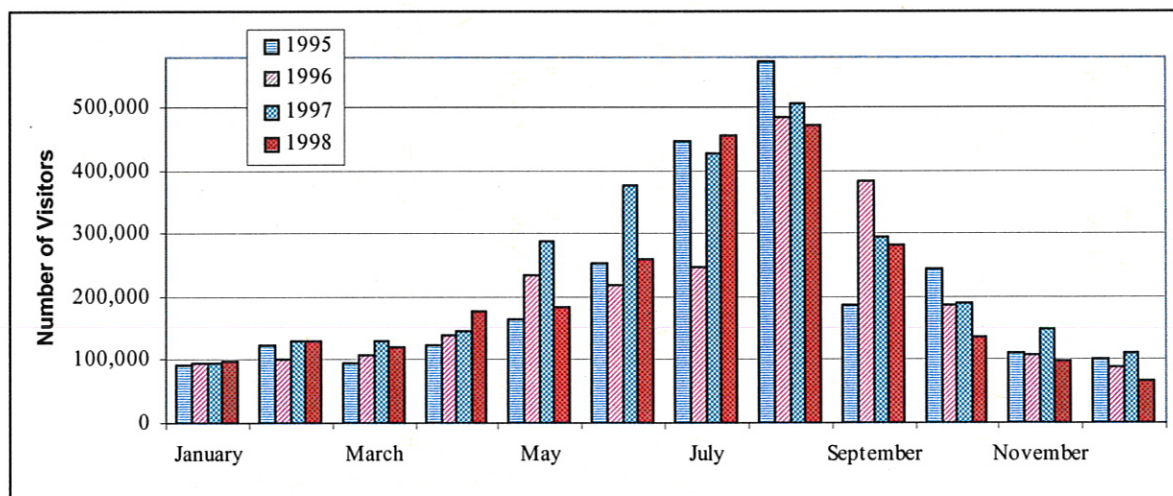
TABLE 7.1: OLYMPIC NATIONAL PARK VISITORS BY SUBAREA (1980-1998)

Subarea	1980	1985	1990	1995	1996	1997	1998	Change 1980-1990	Change 1995-1998	Change 1980-1998
Elwha	79,107	119,900	78,652	171,874	151,940	137,026	141,123	-1%	-17.9%	78.4%
Hoh	104,816	116,191	156,788	206,448	155,212	296,760	232,336	50%	12.5%	121.7%
Hoodspout	158,684	120,685	106,866	85,373	99,168	84,391	78,350	-33%	-8.2%	-50.6%
Hurricane Ridge	248,924	356,017	386,819	435,027	447,919	419,332	415,835	55%	-4.4%	67.1%
Kalaloch	233,734	365,833	443,205	538,818	419,019	476,371	531,472	90%	-1.4%	127.4%
Lake Crescent	1,084,329	1,657,887	1,991,387	2,515,592	2,398,075	2,842,758	2,480,041	84%	-1.4%	128.7%
Lake Ozette	22,337	31,081	46,145	83,975	86,603	98,082	111,543	107%	32.8%	399.4%
Mora	176,163	224,414	200,833	345,116	347,879	321,635	266,797	14%	-22.7%	51.4%
Quinalt	269,236	60,525	103,384	302,260	226,972	346,947	364,332	-62%	20.5%	35.3%
Total	2,377,330	3,052,533	3,514,079	4,684,483	4,332,787	5,023,302	4,621,829	48%	-1.3%	94.4%

Source: Olympic National Park

Looking at the breakdown of visitors to the *Olympic National Park* by month (Figure 7.3), as expected, the majority of the visitors to the park occur during the summer months (May-September).

FIGURE 7.3: TOTAL VISITOR COUNTS BY MONTH FOR OLYMPIC NATIONAL PARK



Source: Olympic National Park

OTHER RECREATIONAL ATTRACTIONS

Eleven sites outside of the *Olympic National Park* were also chosen for analysis. Site choice was based on size, availability of data and geographic location. Below are the sites outside of the *Olympic National Park* that were analyzed in this chapter.

- Belfair Recreation Area
- Bogachiel Recreation Area
- Dosewallips Recreation Area
- Dungeness National Wildlife Area
- Lake Cushman Recreation Area
- Makah Museum and Cultural Center
- Sequim Bay Recreation Area
- Twanoh Recreation Area

Tables 7.2a and 7.2 b, depict the visitor counts by tourist attraction outside of the *Olympic National Park*. Data for areas outside the Park is available for a relatively short period of time (from 1985 or 1986 to present). In contrast, data for *Olympic National Park* is available from 1974 to present. Based on information contained in Tables 7.2a and 7.2b and Figure 7.4, it is evident there was a wide range of increases/decreases in overall visitors over the past 4 years. It should be noted that with the increase in information availability over the internet as well as through the US Postal System, it is likely that while the number of visits to visitor centers in the area has decreased, the dispersal of information and actual trips to the areas has increased.

TABLE 7.2A: OTHER RECREATIONAL SITES VISITOR COUNTS 1985-1990

Area	1985	1986	1987	1988	1989	1990	Change 1985-1990
Belfair Recreation Area	351,470	354,371	230,329	267,673	420,857	345,743	-2%
Bogachiel Recreation Area	190,820	119,598	114,812	123,222	139,178	156,028	-18%
Dosewallips Recreation Area	463,318	463,717	305,996	243,507	215,356	195,277	-58%
Dungeness National Wildlife Area	7,139	7,008	7,365	7,371	7,412	7,895	11%
Lake Cushman Recreation Area	154,226	108,915	155,853	162,051	166,384	189,671	23%
Makah Museum and Cultural Center		12,583	13,768	14,930	15,111	15,907	26%*
Sequim Bay Recreation Area	811,216	845,688	483,887	505,921	467,969	440,155	-46%
Twanoh Recreation Area	396,576	420,721	470,653	501,346	482,721	453,853	14%

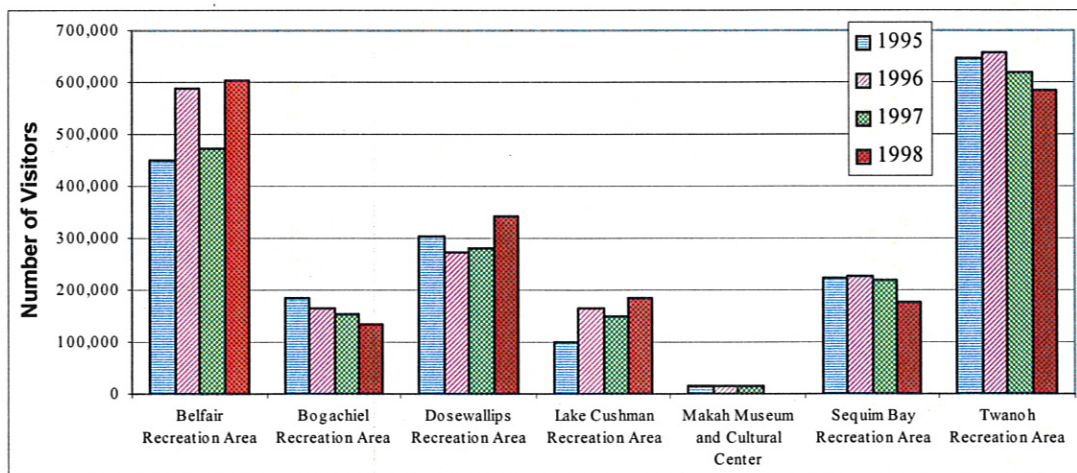
*Change from 1986 to 1990 because of lack of data for 1985

TABLE 7.2B: OTHER RECREATIONAL SITES VISITOR COUNTS 1995-1998

Area	1995	1996	1997	1998	Total	% Change 1995-1998
Belfair Recreation Area	448,432	589,173	471,355	604,685	2,113,645	34.8%
Bogachiel Recreation Area	184,130	165,311	153,915	134,988	638,344	-26.7%
Dosewallips Recreation Area	305,725	273,404	278,913	343,618	1,201,660	12.4%
Lake Cushman Recreation Area	101,332	165,146	151,794	183,871	602,143	81.5%
Makah Museum and Cultural Center	15,097	15,618	14,654	N/A	45,369	-2.9%
Sequim Bay Recreation Area	223,321	227,114	219,513	177,834	847,782	-20.4%
Twanoh Recreation Area	644,432	659,278	619,039	584,657	2,507,406	-9.3%
Total (1995-1998)	2,129,317	2,290,705	2,059,573	2,175,339	8,654,934	2.2%

Source: Olympic Peninsula Tourist Bureau, 1999

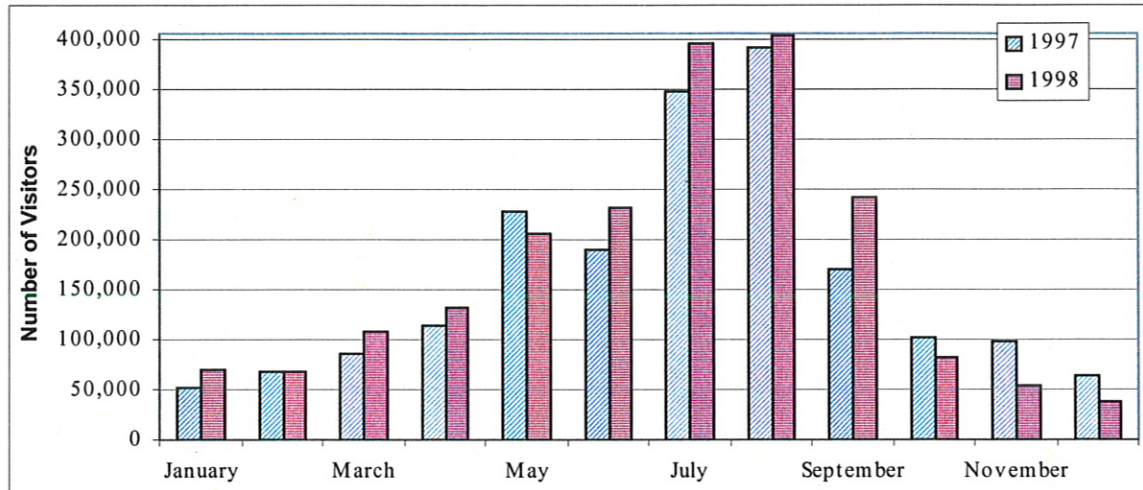
NOTE: Information for the Dungeness National Wildlife Area was not available

FIGURE 7.4: VISITOR COUNTS BY RECREATIONAL SITE
(FOR SITES OUTSIDE THE *OLYMPIC NATIONAL PARK*)

Source: Olympic Peninsula Tourist Bureau, 1999

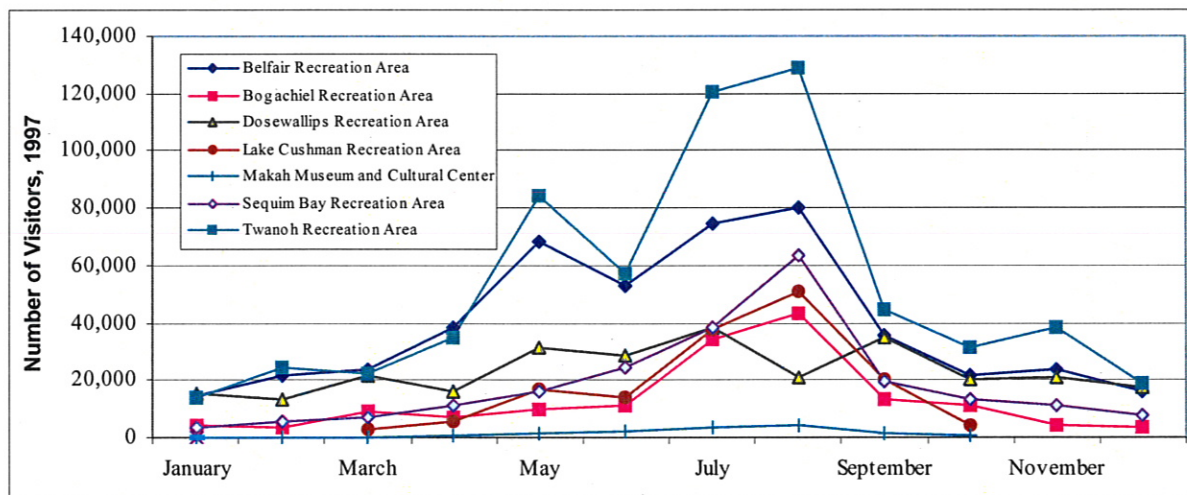
As with the increase in visitors to the *Olympic National Park* during the summer months, variations can also be seen in the other recreational areas. Figure 7.5 shows the overall total visitors by month for both 1997 and 1998 while Figures 7.6 and 7.7 show the variation by month for 1997 and 1998 respectively for each of the reported recreational sites. For both these years, the months of July and August show the largest increases corresponding with the influx of traveling in the summer months.

**FIGURE 7.5: TOTAL VISITOR COUNTS BY MONTH
FOR RECREATIONAL SITES OUTSIDE THE *OLYMPIC NATIONAL PARK***



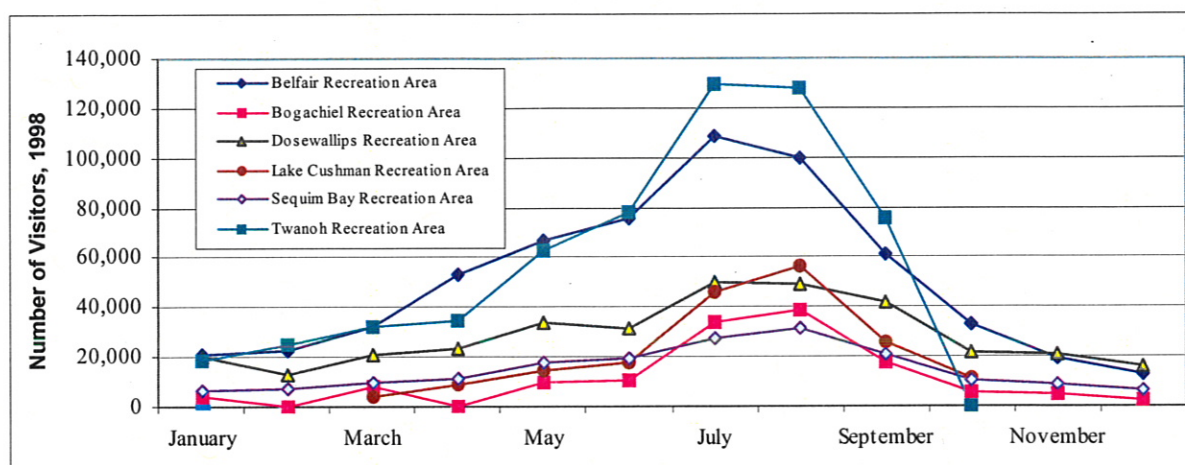
Source: Olympic Peninsula Tourist Bureau, 1999

FIGURE 7.6: 1997 MONTHLY VISITOR COUNTS BY RECREATIONAL SITE



Source: Olympic Peninsula Tourist Bureau, 1999

FIGURE 7.7: 1998 MONTHLY VISITOR COUNTS BY RECREATIONAL SITE



Source: Olympic Peninsula Tourist Bureau, 1999

VISITOR CENTERS

Visitor Centers in the PRTPO area provide information on tourist attractions both inside and outside of the *Olympic National Park*. Table 7.3 and Figure 7.8 show the yearly counts of persons entering each of the visitor centers. Only the Forks Visitor Center increased in the number of visitors over the past five years. Although, the overall number of individuals using the visitor centers as information gathering venues has decreased, the largest number of visitors are still in the summer months of June, July, August, and September (See Figure 7.9 -- Monthly totals are reported for 1997 because 1998 monthly totals were incomplete). One reason for the decrease in visitors is the availability of information on the Internet as well as information being mailed to interested parties. Over the past five years, the Port Angeles Visitor Center has been the most frequented (45 percent of the total visitors over the past five years), as a direct result of the ferry access and other visitor amenities in the vicinity.

TABLE 7.3: YEARLY VISITOR CENTER COUNTS

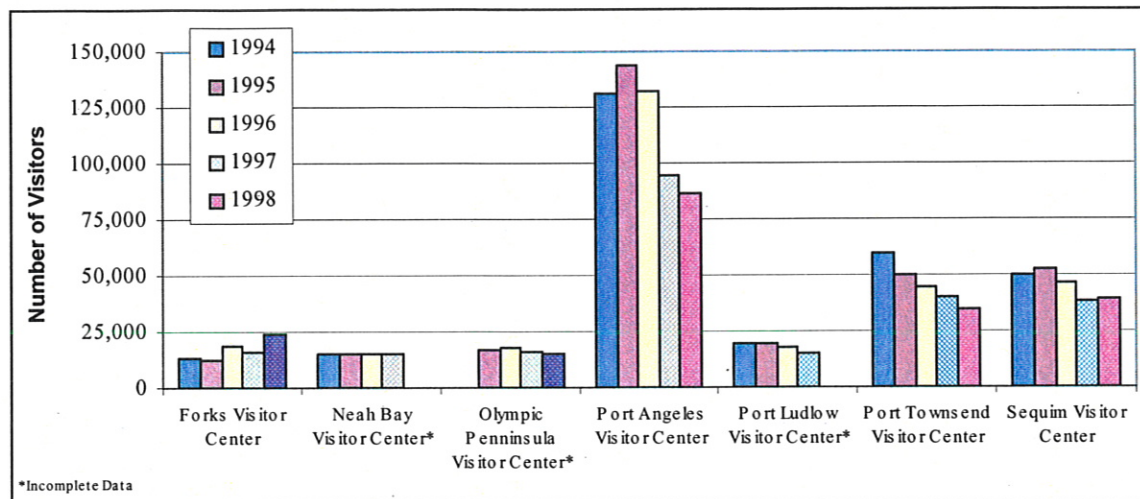
	1994	1995	1996	1997	1998	% Change 1994-1998
Forks Visitor Center	13,597*	15,637*	19,063*	16,324*	23,812	75.1%
Neah Bay Visitor Center**	15,362	15,097	15,064	15,042		-2.1%
Olympic Peninsula Gateway*		17,237	17,810	16,393	15,537	-9.9%
Port Angeles Visitor Center	130,938	144,003	128,424	100,914	86,656	-33.8%
Port Ludlow Visitor Center*	19,643	19,580	17,810	15,386		-21.7%
Port Townsend Visitor Center	59,385	49,913	41,500	41,502	35,218	-40.7%
Sequim Visitor Center	49,850	51,836	46,532	38,584	39,444	-20.9%
Total	288,775	296,066	268,393	227,752	200,667	-30.5%

Source: North Olympic Peninsula Visitor and Convention Bureau

Incomplete data. For the percentage of change in visitors for these items, the data available was used (e.g., for Neah Bay and Port Ludlow, the change is 1197-1994; for Olympic Gateway, the change represents the change between 1998 and 1995).

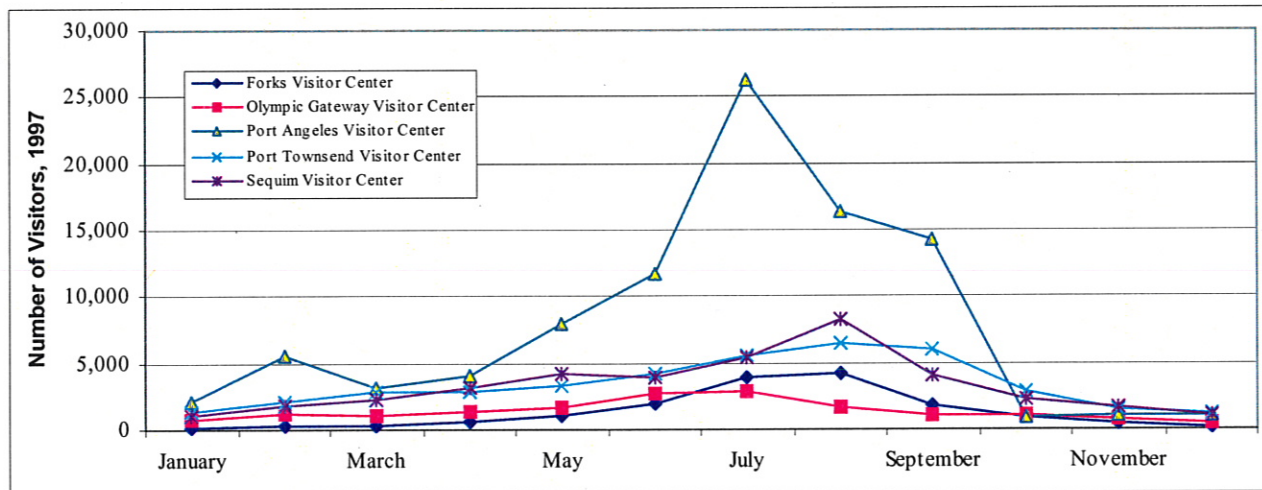
** Makah Museum and Cultural Center

FIGURE 7.8: YEARLY VISITOR CENTER COUNTS



Source: North Olympic Peninsula Visitor and Convention Bureau

FIGURE 7.9: VISITOR CENTER COUNTS, 1997



NOTE: Information by month for the Neah Bay Visitor Center (the Makah Museum and Cultural Center) was not available.

TRAFFIC ANALYSIS

Figure 7.1 presented previously, depicts the main roadways experiencing significant volumes of tourist traffic within the Peninsula RTPPO area. As shown on the map, these main travel routes are State Routes – including SR-104 from Kitsap County to US-101 in Jefferson County, SR-3 in Kitsap and Mason Counties, and all of US-101 in Jefferson, Clallam, and Mason Counties. The major access highway to *Olympic National Park* is the northern portion of US-101 near Sequim and Port Angeles.

The PRTPO Highways/Level of Service/Tourism Subcommittee and the Technical Advisory Committee have adopted designated “Tourist Corridors” which are depicted in Figure 7.1. Also depicted in Figure 7.1 are the tourist access routes. Tourist access routes provide direct access to specific tourist attractions and local tourist/recreational areas.

TRAFFIC GROWTH ANALYSIS

Average daily traffic counts were collected for 18 sites on the Olympic Peninsula (See Table 7.4). These sites were chosen in order to represent traffic flows on the Peninsula and to provide growth rates of traffic flows over the past

four years: 1994-1997 inclusive. Figure 7.10, Traffic Count Locations, depicts the location of these counts and their growth rates from 1994 to 1997.

INSERT FIGURE 7.10: TRAFFIC COUNT LOCATIONS

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Figure 7.10:
Traffic Count
Locations

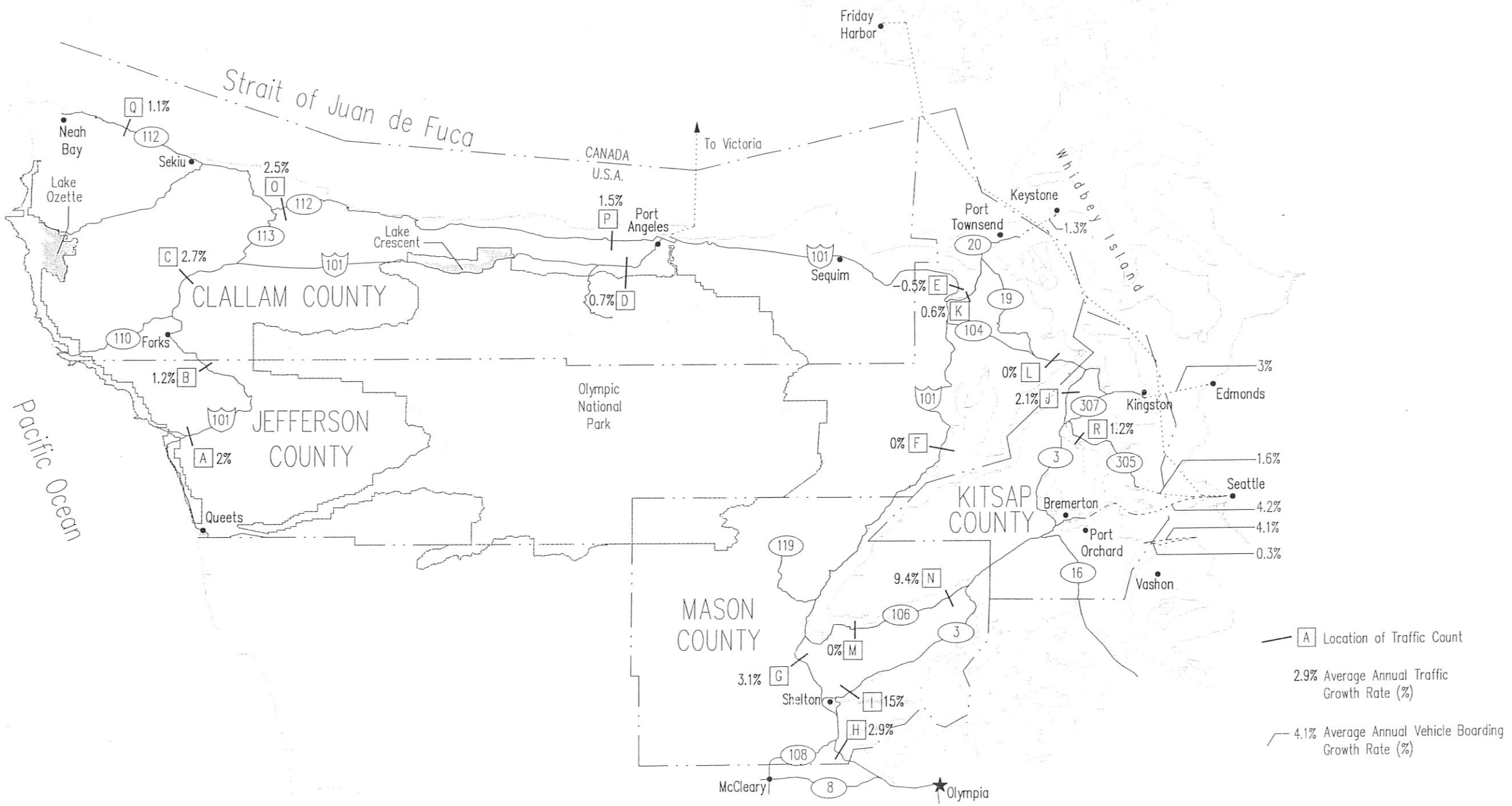


TABLE 7.4: SELECTED TRAFFIC COUNTS

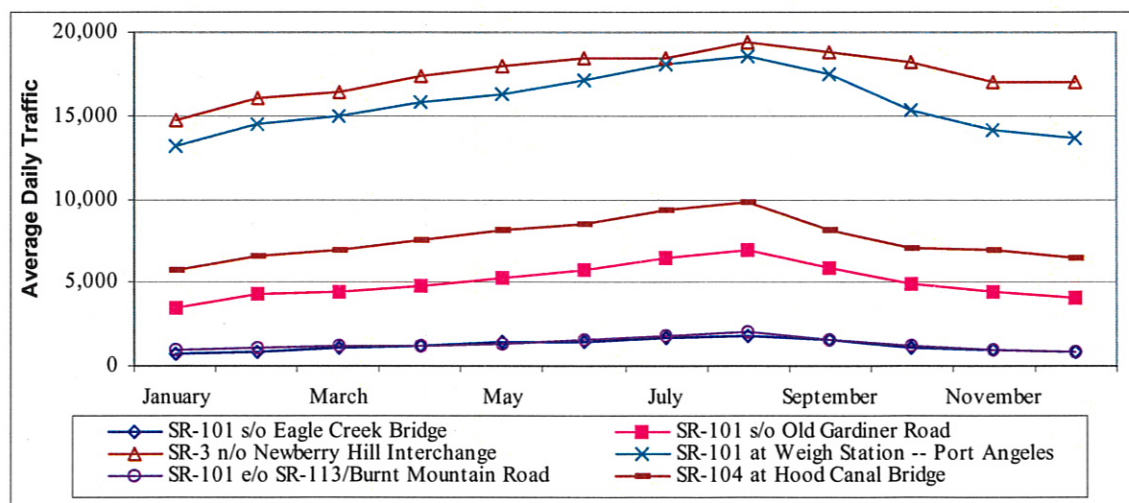
Map ID	Route	Mile Post	Segment Description	1994	1995	1996	1997	Change 1994-1997
A	101	167.59	North of Hoh Village Road	760	800	800	820	8%
B	101	190.02	North of Jct. Russell Road	2,100	2,100	2,100	2,200	5%
C	101	193.12	North of La Push Road	5,500	5,900	5,900	6,100	11%
D	101	242.99	East of Jct. SR-112	7,000	6,900	5,900	7,200	3%
E	101	282.56	West of SR-20	9,600	10,000	9,800	9,400	-2%
F	101	294.59	After Jct. Center Road	2,500	2,500	2,600	2,500	0%
G	101	339.48	North of Jct. Purdy Cutoff	4,900	4,900	5,400	5,500	12%
H	101	356.92	Mason/Thurston County	17,000	18,000	19,000	19,000	12%
I	3	2.93	After Jct. Front Street	7,500	11,000	11,000	12,000	60%
J	3	56.03	North of Pioneer Way	12,000	12,000	12,000	13,000	8%
K	20	0.09	North of SR-101	4,100	4,200	4,200	4,200	2%
L	104	10.96	East of South Pt. Road	1,200	1,200	1,100	1,200	0%
M	106	0	North of Jct. SR-101	1,500	1,600	1,500	1,500	0%
N	106	20.05	South of Jct. SR-3	4,500	6,100	6,100	6,200	38%
O	112	23.12	East of Jct. Burnt Mnt. Road	1,000	1,100	1,100	1,100	10%
P	112	61.25	West Jct. SR-101		4,500	4,500	4,700	4%
Q	112		Boundary of Makah Reservation (Neah Bay)**			930	950	2%
R	305	12.82	West of Jct. Bond Road	21,000	21,000	22,000	22,000	5%

* In 1987 WSDOT changed the way it carried out traffic counts and began to count in terms of units rather than axle equivalents. For example, under the new approach, a five-axle truck is report as one vehicle as compared to two and a half under the old approach.

** Counts at this location were only available for 1996 and 1997; therefore, the percent change represent an annual growth rate, not a ten year growth rate.

In addition to the traffic counts shown in Table 7.4, Figure 7.11 shows the traffic counts by month, for the permanent counters maintained by the Washington State Department of Transportation (WSDOT). In every instance, the average daily traffic increases during the months of June, July, and August, corresponding with the peak tourist season, with the month of August having the most travel on each of these routes.

FIGURE 7.11: 1998 AVERAGE DAILY TRAFFIC (FOR PERMANENT COUNTERS)



Source: Washington State Department of Transportation (Transportation Data Office), 1999

* For the six permanent counters, on average, the percentage increase in traffic during the summer months versus during the rest of the year varied from approximately a 100% increase (double the normal traffic) on SR-101 south of Eagle Creek Bridge to only 20% on SR-3 north of the Newberry Hill interchange. This large range of difference is attributable to the relatively small daily traffic on SR-101 in relation to the higher average daily traffic on SR-3 and the density of development along that section of the SR-3 corridor (800-1,000 for SR-101; 14,000-17,000 for SR-3).

A review of Table 7.4 and Figure 7.10 shows that in Mason County, SR-3 north of Front Street has seen the highest growth rate from 1994 to 1997 (60 percent). This growth rate is substantially higher than rates at other locations. The second highest growth rate is 38 percent on SR-106 south of the junction with SR-3.

The lowest growth rate between 1994 and 1997 was along US-101 west of SR-20 in Jefferson County. At this location, average daily traffic volumes have dropped 2 percent from 1994 to 1997. Overall, this data indicates varying growth rates on the major Peninsula travel routes.

Additional analysis was performed to obtain the amount of recreational vehicles (specifically RV's) over Labor Day Weekend in 1992. RV's are the subset of recreational travel. Recreational travel consists of all vehicles making recreational trips, of which RV's are one type of vehicle. Separate analysis of RV's is relevant because their large size impacts roadway visibility and driver perception of maneuverability and passing safety on a greater scale than passenger cars. For the 1992 study, WSDOT conducted traffic counts of RV's at two locations on the Olympic Peninsula on and around Labor Day weekend on US-101 and SR-104 (see Table 7.5). The study indicated that recreational vehicles can total as much as 5-7 percent or as little as 1.5 percent of all traffic.

**TABLE 7.5: VEHICLE CLASSIFICATION COUNTS AND PERCENTAGES
US-101 IN MASON COUNTY AND SR-104 AT HOOD CANAL BRIDGE
(LABOR DAY WEEKEND)**

	Friday, September 4, 1992				Monday, September 7, 1992				Wednesday, September 9, 1992			
	US-101*		SR-104**		US-101*		SR-104**		US-101*		SR-104**	
Vehicle Type	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Automobiles	3,010	91.6%	4,252	90.8%	3,967	91.3%	6,846	92.7%	2,168	91.1%	3,072	93.3%
Recreational Vehicles	176	5.4%	282	6.0%	307	7.1%	429	5.8%	56	2.4%	50	1.5%
Trucks	75	2.3%	133	2.8%	42	1.0%	43	0.6%	137	5.8%	147	4.5%
Buses	2	0.1%	6	0.1%	0	0.0%	2	0.0%	7	0.3%	8	0.2%
Motorcycles	19	0.6%	7	0.1%	31	0.7%	61	0.8%	7	0.3%	17	0.5%
Bicycles	5	0.2%	5	0.1%	0	0.0%	4	0.1%	4	0.2%	0	0.0%
Total	3,287	100.0%	4,685	100.0%	4,347	100.0%	7,385	100.0%	2,379	100.0%	3,294	100.0%

* US-101 traffic counts were taken by WSDOT at MP 344.71 near Fairground Road. The counts were taken for four hour duration (4:00pm-8:00pm) on September 4 and 9th, and for six hour duration (2:00pm-8:00pm) on September 7, 1992 (Labor Day).

** SR-104 traffic counts were taken by WSDOT at MP 15.47 near the junction with SR-3. The counts were taken for four hour duration (4:00pm-8:00pm) on September 4 and 9th, and for six hour duration (2:00pm-8:00pm) on September 7, 1992 (Labor Day).

FERRY TRAVEL

As stated previously, because of the geographical placement of the PRTPO area, ferry travel plays an important and unique role in tourist activity. To accommodate both visitors and residents of the area, Washington State Ferry System (WSF) operates both combination vehicle/passenger vessels and passenger-only vessels on five routes within the peninsula service area as listed below:

- Fauntleroy/Vashon/Southworth
- Downtown Seattle/Bremerton (passenger only ferry available)
- Downtown Seattle/Bainbridge Island
- Edmonds/Kingston
- Port Townsend/Keystone

Table 7.6 and Figure 7.12 show the yearly total passenger counts by route for the past three years. Over 800,000 people have used these five ferry routes for each of the past three years. Almost half of the total passengers are traveling between Seattle and Bainbridge Island. This route (Seattle-Bainbridge) is located north of Bremerton, and appears to be the preferred route to access the *Olympic National Forest*, as well as other points on the northern portion of the PRTPO area.

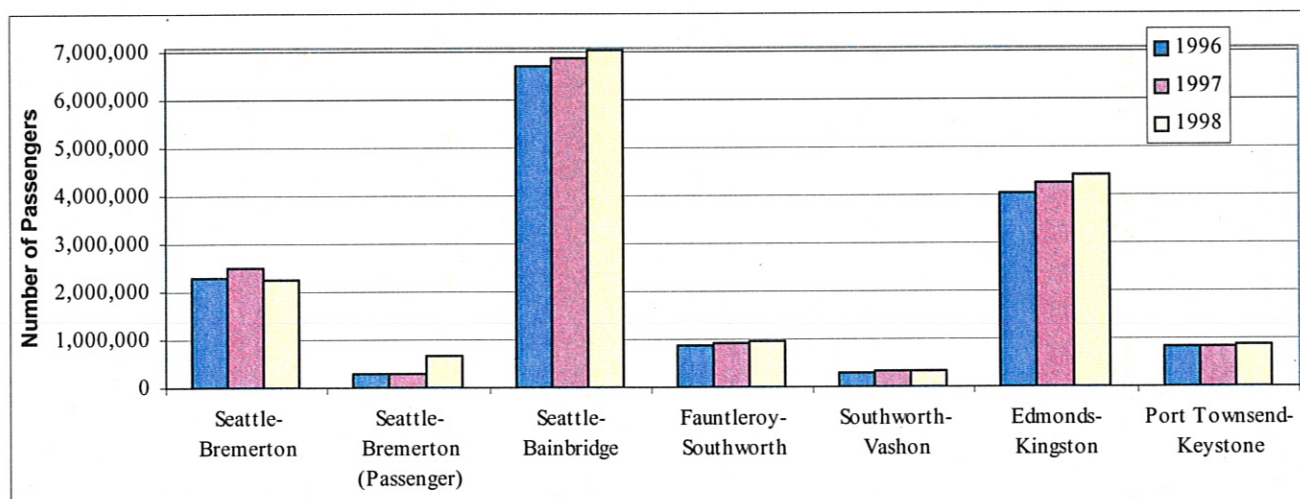
TABLE 7.6: YEARLY FERRY PASSENGER COUNTS

	1996	1997	1998	Total	Percent of Total	Percent Change 1996-1998
Seattle-Bremerton	2,309,474	2,518,767	2,264,443*	7,092,684	14.8%	-1.9%
Seattle-Bremerton (Passenger only)	286,048	285,043	662,101*	1,233,192	2.6%	131.5%
Seattle-Bainbridge	6,738,824	6,880,864	7,056,241	20,675,929	43.1%	4.7%
Fauntleroy-Southworth	858,677	924,910	963,749	2,747,336	5.7%	12.2%
Southworth-Vashon	311,772	324,868	314,744	951,384	2.0%	1.0%
Edmonds-Kingston	4,063,973	4,270,239	4,428,145	12,762,357	26.6%	9.0%
Port Townsend-Keystone	842,324	828,770	868,494	2,539,588	5.3%	3.1%
Totals	15,411,092	16,033,461	16,557,917	48,002,470	100.0%	

Source: Washington State Ferries, 1999

*It should be noted a second passenger-only ferry was added to the Seattle Bremerton route in mid 1998 accounting for the 131% growth in ridership over the past three years, as well as the slight decrease in passengers on the auto/passenger Seattle-Bremerton route. By adding the two Seattle-Bremerton routes together, an increase of 331,022 passengers (12.75%) from 1996-1998 is calculated.

FIGURE 7.12: YEARLY FERRY PASSENGER COUNTS



Source: Washington State Ferries

Table 7.7 shows the average number of daily ferry trips during the year for each ferry route. The larger the ridership, the more ferry runs, although by replacing smaller vehicles with larger vehicles, less ferry runs will be necessary to accommodate the same number of passengers. At the present time, the largest boats service the Seattle-Bainbridge, and the Edmonds-Kingston ferry routes.

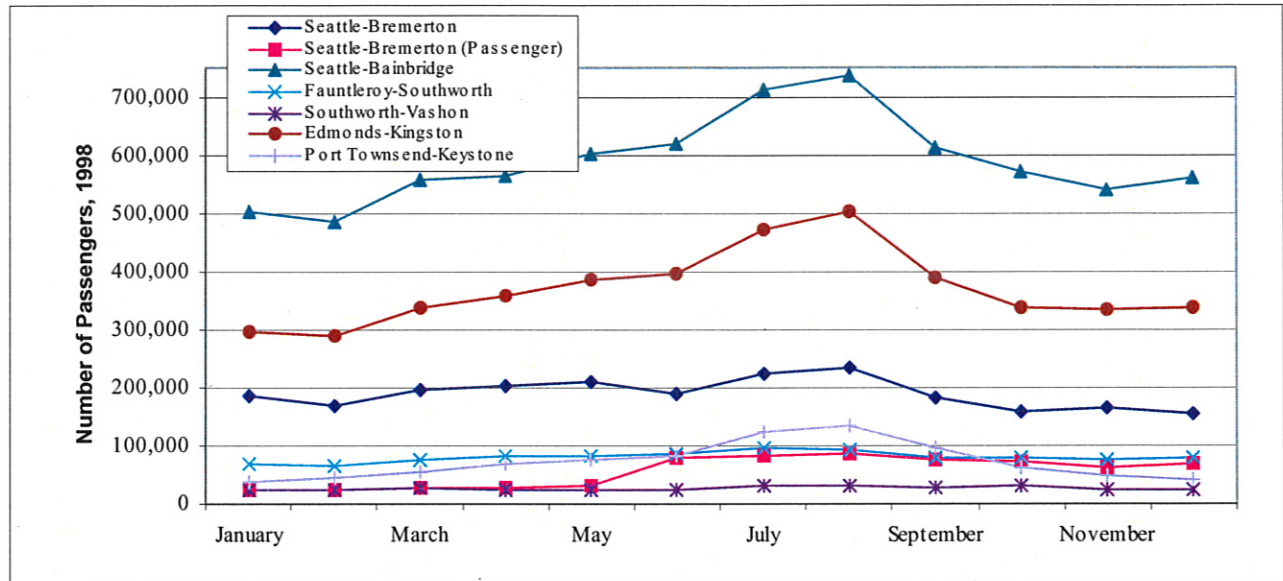
TABLE 7.7: NUMBER OF FERRY RUNS PER ROUTE

Route	Average Number of Daily Round-trips	Average Boat Vehicle Capacity	Average Boat Passenger Capacity
Seattle-Bremerton	16	115	1,200
Seattle-Bremerton (Passenger)	14	--	317
Seattle-Bainbridge	24	218	2,500
Fauntleroy-Southworth	27	100	900
Southworth-Vashon	22	100	900
Edmonds-Kingston	28	183	2,250
Port Townsend-Keystone	17	75	616

Source: Washington State Ferries, 1999

Looking at total ferry travel (passenger and vehicles) by month for 1998 (Figure 7.13), it is evident that ferry travel on each route increases during the summer months (June-September). As expected, the Seattle-Bainbridge route has the highest ridership volumes, with the Edmonds-Kingston route second.

FIGURE 7.13: FERRY PASSENGER COUNTS BY MONTH, 1998



NOTE: These counts include all passengers in vehicles (drivers and passengers) as well as walk on passengers

Figure 7.14 shows the total vehicle and passenger counts by route for 1998, while Tables 7.8 and 7.9 show the breakdown of ferry travel by month for both total number of vehicles and total number of passengers (drivers, passengers in vehicles, and walk-ons).

FIGURE 7.14: PASSENGER AND VEHICLE FERRY COUNTS, 1998

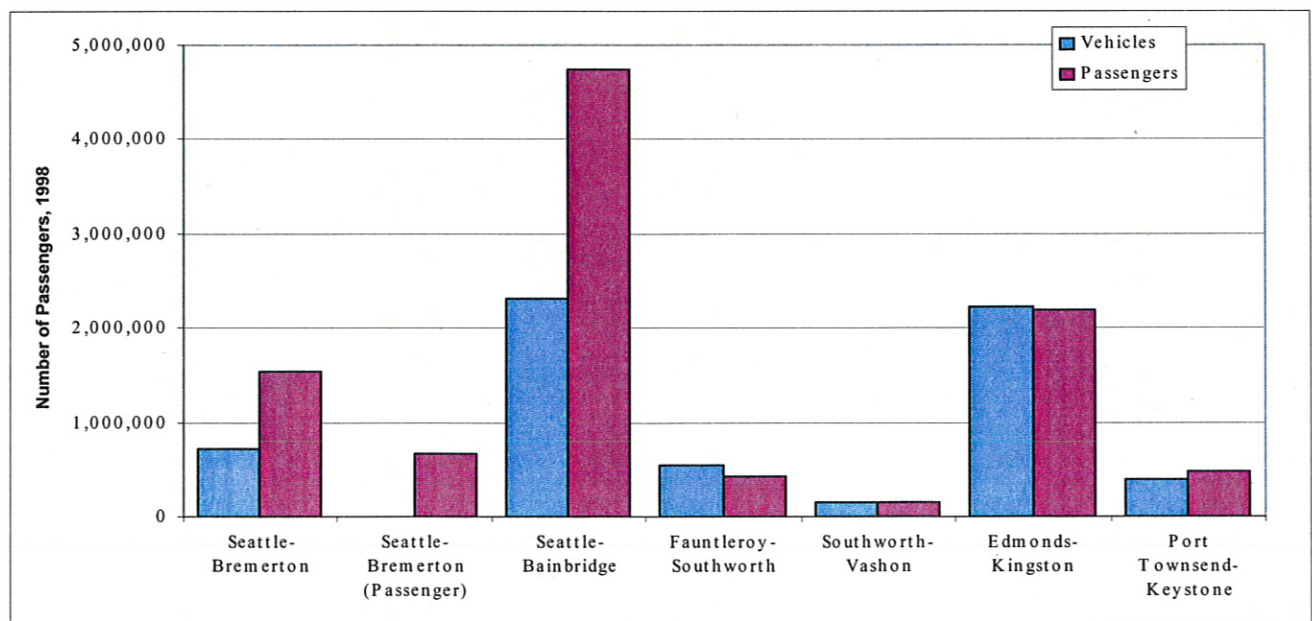


TABLE 7.8: VEHICLE COUNTS ON FERRY SYSTEM BY MONTH, 1998

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Seattle-Bremerton	57,853	53,629	60,714	59,284	61,987	61,073	67,390	70,513	59,677	54,482	55,019	53,282
Seattle-Bremerton (Passenger)												
Seattle-Bainbridge	174,536	169,600	192,266	186,006	199,594	200,466	213,675	219,945	195,074	196,538	182,384	188,961
Fauntleroy-Southworth	40,942	38,885	44,404	45,648	46,937	46,787	50,203	50,756	44,377	45,132	42,607	43,576
Southworth-Vashon	13,254	10,974	13,130	12,346	12,492	12,174	13,724	14,550	13,252	13,604	11,918	11,590
Edmonds-Kingston	156,670	152,123	176,989	182,712	191,856	194,475	214,183	228,242	198,286	182,901	175,014	175,469
Port Townsend-Keystone	19,410	21,424	26,985	30,723	33,621	36,648	50,474	54,497	42,514	31,103	23,277	20,199
Total	462,665	446,635	514,488	516,719	546,487	551,623	609,649	638,503	553,180	523,760	490,219	493,077

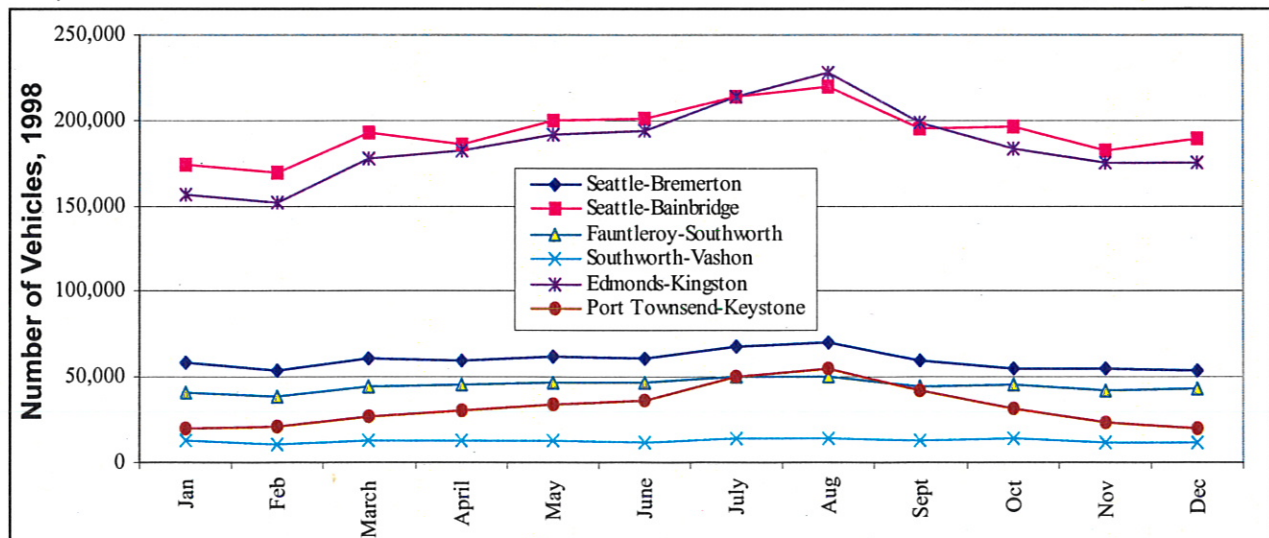
TABLE 7.9: PASSENGER COUNTS ON FERRY SYSTEM BY MONTH, 1998

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Seattle-Bremerton	126,490	114,393	135,569	142,044	146,798	126,625	126,490	114,393	135,569	142,044	146,798	126,625
Seattle-Bremerton (Passenger)	24,572	24,284	27,380	25,934	30,775	79,500	24,572	24,284	27,380	25,934	30,775	79,500
Seattle-Bainbridge	326,698	316,039	365,992	376,946	400,801	418,184	326,698	316,039	365,992	376,946	400,801	418,184
Fauntleroy-Southworth	28,896	27,175	32,757	35,505	35,849	37,805	28,896	27,175	32,757	35,505	35,849	37,805
Southworth-Vashon	12,260	12,224	14,290	12,890	11,180	13,058	12,260	12,224	14,290	12,890	11,180	13,058
Edmonds-Kingston	139,456	135,186	158,757	176,412	192,342	201,877	139,456	135,186	158,757	176,412	192,342	201,877
Port Townsend-Keystone	19,512	21,734	28,582	37,049	40,381	46,277	19,512	21,734	28,582	37,049	40,381	46,277
Total	677,884	651,035	763,327	806,780	858,126	923,326	1,130,105	1,177,698	909,927	787,033	755,005	923,326

NOTE: Passenger counts include both passengers in vehicles (not driver) and walk-on passengers.

Looking only at vehicle-ferry use (Figure 7.15 based on Table 7.8), the most used ferry routes (for vehicles) were the Seattle-Bainbridge and the Edmonds-Kingston routes. In fact, for the months of July, August, and September, the Edmonds-Kingston route surpassed the Seattle-Bainbridge route for the number of vehicles carried. For the summer months, the Port Townsend-Keystone ferry route carries close to 150% of the number of vehicles it carries during the remaining months. In comparison, the Seattle-Bainbridge route carries only 30% more vehicles in the summer months than in an average non-summer month. It should be noted that the average vehicle count for the Port Townsend-Keystone ferry is one of the least (in number of vehicles and passengers) utilized ferries servicing the Olympic Peninsula. Only the Southworth-Vashon ferry carries fewer vehicles/passengers.

FIGURE 7.15: NUMBER OF VEHICLES ON FERRY ROUTES (BY MONTH), 1998



In 1991, a study was completed for the Olympic Peninsula ferry routes indicating the type of vehicle driven onto the five Olympic Peninsula WSF ferry routes (Table 7.10). While all ferry routes are key links to the PRTPO area, the routes to Kingston and to Port Townsend are considered to be the most significant tourist routes. The 1991 data provides insight into the proportions of regular vehicle, commuter, RV, and commercial travel for each of the ferry routes serving the PRTPO.

**TABLE 7.10: WASHINGTON STATE FERRY SYSTEM
1991 VEHICLE COUNTS**

Route	Total Vehicles	Regular Auto		Commuter		Recreational		Commercial		Miscellaneous	
		Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Downtown Seattle/Bremerton	670,177	449,019	67.0%	193,011	28.8%	3,351	0.5%	6,702	1.0%	18,095	2.7%
Downtown Seattle/Bainbridge Island	2,137,856	1,118,099	52.3%	895,762	41.9%	12,827	0.6%	47,033	2.2%	64,136	3.0%
Edmonds/Kingston	1,822,548	1,221,107	67.0%	468,395	25.7%	43,741	2.4%	54,676	3.0%	34,628	1.9%
Fauntleroy/Vashon/Southworth	1,750,616	546,192	31.2%	1,102,888	63.0%	7,002	0.4%	40,264	2.3%	52,518	3.0%
Port Townsend/Keystone	371,119	302,833	81.6%	23,009	6.2%	24,494	6.6%	7,793	2.1%	6,309	1.7%
Total	6,752,316	3,637,250		2,683,065		91,415		156,468		175,686	

WSDOT Marine Division, Rider Segment Report, July 1991 to June 30, 1992

Table 7.10 shows the Port Townsend/Keystone route as carrying the largest percentage of recreational vehicles—7%. Two percent of all vehicles on the Edmonds/Kingston route are recreational vehicles, and the four other routes to the PRTPO have less than one percent recreational vehicles as compared to all other vehicles.

While the Port Townsend/Keystone route has the highest percentage of recreational vehicles, the actual count of RV's on the Port Townsend/Keystone route (24,494) is almost half of that on the Edmonds/Kingston Route (43,741). The Seattle/Bainbridge Island route has the highest use but carries only 0.6% (12,827) recreational vehicles.

While these statistics provide some insight into the amount of tourist travel using ferry routes, the data is insufficient because many of the regular auto trips could be recreational trips. However, the split between recreational and non-recreational auto travel is not possible from this information. In addition, because of variations in the counting methods (see Chapter 8), making direct comparisons between ferry auto counts and WSDOT state route counts is difficult without additional study and details.

WEEKEND FERRY TRAVEL

It is important to the economic diversification efforts as well as tourism within the PRTPO Region that at least two routes be identified for general purpose vehicle service standards on weekends. This would ensure that some access for the recreational driver could be obtained without significant delay. Previously the two routes identified for this weekend standard were the Edmonds/Kingston and the Port Townsend/Keystone routes. These routes were given service standards for the eastbound Sunday traffic time period of a one-boat wait. It may be beneficial to include the Seattle-Bainbridge route as a significant route and maintain a maximum service standard of a one-boat wait.

Impacts on Road Network

To date, there have been no studies (for the area) providing a direct link between tourist traffic and the degradation of road surface. Therefore, using the data reported in this chapter, along with information contained in other chapters within the Regional Transportation Plan, a preliminary estimate of tourist travel impacts has been calculated.

Tourist traffic projections were based on the trend analysis method of forecasting traffic growth as outlined in Chapter 5 (Regional Road System), using an average growth rate of 1.5 percent per year. Projected average daily traffic (ADT) for a number of selected traffic count locations is shown in Table 7.11. The percentage of traffic attributable to tourist related activities was estimated based on information received from WSDOT, WSF, visitor centers and major attractions/destinations. These percentages and the resulting ADT estimates for traffic attributed to tourism are also included in Table 7.11.

TABLE 7.11: TRAFFIC PROJECTIONS (ADT) FOR SELECTED TRAFFIC COUNT LOCATIONS

TABLE A-11. TRAFFIC PROJECTIONS (A-11.1) FOR SELECTED TRAFFIC SEGMENTS										
Map ID	Route	Mile Post	Segment Description	Traffic Projections			Attributable to Tourism			
				1997	2005	2020	% Attrib	1997	2005	2020
A	101	167.6	North of Lower Hoh Village Road	820	938	1,172	75%	615	703	879
B	101	190.0	North of Jct. Russell Road	2,200	2,515	3,145	70%	1,540	1,761	2,201
C	101	193.1	North of La Push Road (SR-110)	6,100	6,975	8,720	80%	4,880	5,580	6,976
D	101	242.6	East of Jct. SR-112	7,200	8,232	10,292	65%	4,680	5,351	6,690
E	101	282.6	West of SR-20	9,400	10,748	13,437	55%	5,170	5,911	7,391
F	101	294.6	After Jct. Center Road	2,500	2,858	3,574	50%	1,250	1,429	1,787
G	101	339.5	North of Jct. Purdy Cutoff	5,500	6,289	7,862	45%	2,475	2,830	3,538
H	101	356.9	Mason/Thurston County	19,000	21,724	27,161	40%	7,600	8,690	10,864
I	3	2.9	After Jct. Front Street/Pine Street	12,000	13,721	17,154	40%	4,800	5,488	6,862
J	3	56.0	North of Pioneer Way	13,000	14,864	18,584	35%	4,550	5,202	6,504
K	20	0.1	North of SR-101	4,200	4,802	6,004	50%	2,100	2,401	3,002
L	104	11.0	East of South Pt. Road	1,200	1,372	1,715	30%	360	412	515
M	106	0.0	North of Jct. SR-101	1,500	1,715	2,144	30%	450	515	643
N	106	20.1	South of Jct. SR-3	6,200	7,089	8,863	30%	1,860	2,127	2,659
O	112	23.1	East of Jct. Burnt Mt. Road (SR-113)	1,100	1,258	1,572	75%	825	943	1,179
P	112	61.1	West Jct. SR-101	4,700	5,374	6,719	70%	3,290	3,762	4,703
Q	112		Boundary of Makah Reservation (Neah Bay)	950	1,086	1,358	70%	665	760	951
R	305	12.8	West of Jct. Bond Road (SR-307)	22,000	25,155	31,449	35%	7,700	8,804	11,007

Data from the six permanent WSDOT count locations was used to estimate the percentage of annual traffic that occurred in each of the peak tourist months (May-September). These percentages (shown in Table 7.12) were then used to calculate the summer month average daily traffic projections for 2005 and 2020 (as shown in Table 7.13).

**TABLE 7.12: AVERAGE PERCENT OF TOTAL TRAFFIC FOR SUMMER MONTHS
AT PERMANENT TRAFFIC COUNT STATIONS**

	May %	June %	July %	August %	September %
Average Percent of Total Traffic for Year	8.8%	9.3%	10.4%	11.1%	9.5%

TABLE 7.13: SUMMER MONTH AVERAGE DAILY TRAFFIC PROJECTIONS AT SELECTED TRAFFIC COUNT LOCATIONS

Map ID	Route	Mile Post	Segment Description	2005					2020				
				May	June	July	Aug	Sept	May	June	July	Aug	Sept
A	101	167.6	North of Lower Hoh Village Road	995	1,047	1,175	1,246	1,072	1,244	1,309	1,469	1,558	1,341
B	101	190.0	North of Jct. Russell Road	2,670	2,808	3,152	3,343	2,877	3,338	3,511	3,940	4,179	3,597
C	101	193.1	North of La Push Road (SR-110)	7,403	7,787	8,739	9,268	7,977	9,255	9,735	10,926	11,588	9,973
D	101	242.6	East of Jct. SR-112	8,738	9,191	10,315	10,940	9,416	10,924	11,491	12,896	13,677	11,772
E	101	282.6	West of SR-20	11,408	11,999	13,466	14,282	12,293	14,262	15,002	16,836	17,856	15,369
F	101	294.6	After Jct. Center Road	3,034	3,191	3,582	3,798	3,269	3,793	3,990	4,478	4,749	4,087
G	101	339.5	North of Jct. Purdy Cutoff	6,675	7,021	7,879	8,357	7,192	8,345	8,778	9,851	10,448	8,992
H	101	356.9	Mason/Thurston County	23,058	24,253	27,219	28,869	24,847	28,828	30,322	34,031	36,092	31,064
I	3	2.9	After Jct. Front Street/Pine Street	14,563	15,318	17,191	18,233	15,693	18,207	19,151	21,493	22,795	19,619
J	3	56.0	North of Pioneer Way	15,777	16,594	18,624	19,752	17,000	19,725	20,747	23,284	24,695	21,254
K	20	0.1	North of SR-101	5,097	5,361	6,017	6,381	5,492	6,373	6,703	7,523	7,978	6,867
L	104	11.0	East of South Pt. Road	1,456	1,532	1,719	1,823	1,569	1,821	1,915	2,149	2,280	1,962
M	106	0.0	North of Jct. SR-101	1,820	1,915	2,149	2,279	1,962	2,276	2,394	2,687	2,849	2,452
N	106	20.1	South of Jct. SR-3	7,524	7,914	8,882	9,420	8,108	9,407	9,895	11,105	11,778	10,137
O	112	23.1	East of Jct. Burnt Mt. Road (SR-113)	1,335	1,404	1,576	1,671	1,438	1,669	1,756	1,970	2,090	1,798
P	112	61.1	West Jct. SR-101	5,704	6,000	6,733	7,141	6,146	7,131	7,501	8,418	8,928	7,684
Q	112		Boundary of Makah Reservation (Neah Bay)	1,153	1,213	1,361	1,443	1,242	1,441	1,516	1,702	1,805	1,553
R	305	12.8	West of Jct. Bond Road (SR-307)	26,699	28,083	31,517	33,427	28,770	33,380	35,110	39,404	41,791	35,969

Using the same methodology and projections of annual vehicle boardings, based on 1991-1998 average growth rates, average percentages of total vehicle boardings occurring during the summer months (May-September) were calculated for each ferry route. Table 7.14 shows the projected monthly and daily tourism related vehicle boardings on each of the routes for 2005 and 2020.

TABLE 7.14: TOURIST TRAVEL BY VEHICLE ATTRIBUTED TO THE SUMMER MONTHS ON FERRY ROUTES

Ferry Route	2005 Tourist Vehicle Count per month	2020 Tourist Vehicle Count per month	1998 Maximum Tourist Vehicles per day	2005 Tourist Vehicles per day	2020 Tourist Vehicles per day
Seattle-Bremerton	15,730	18,136	470	507	585
Seattle-Bainbridge	39,515	47,333	1,158	1,275	1,527
Fauntleroy-Southworth-Vashon	20,357	38,434	389	567	1,239
Edmonds-Kingston	28,516	45,641	716	920	1,472
Port Townsend-Keystone	17,941	20,100	545	579	648
Total	122,049	169,644	3,278	3,848	5,472

Figure 7.16 graphically shows the 2005 and 2020 projections of traffic and ferry travel as well as the number of vehicles attributable to tourism. This figure is a compilation of Tables 7.13 and 7.14.

Recreational travel has several impacts on roadways. Directional flow and peak hours of recreational traffic may not correspond to commuter peak hours and conventional directional design volumes. The road's design characteristics – such as width, alignment, and sight distance – may be inappropriate for recreational driving or for RV use (e.g., the width and height of RV's can obstruct the sight distance of other vehicles, RV's require a larger turning radii or driveway access than other vehicles, etc.).

Consequently, transportation improvements stemming from recreational travel needs depend on the roadway structure, the type of activity (e.g., turning or passing), and the types of vehicles (e.g., RV's versus automobiles). This section provides insight into the recreational activities in the PRTPO Region and the impacts to the transportation infrastructure as well as suggested transportation improvements.

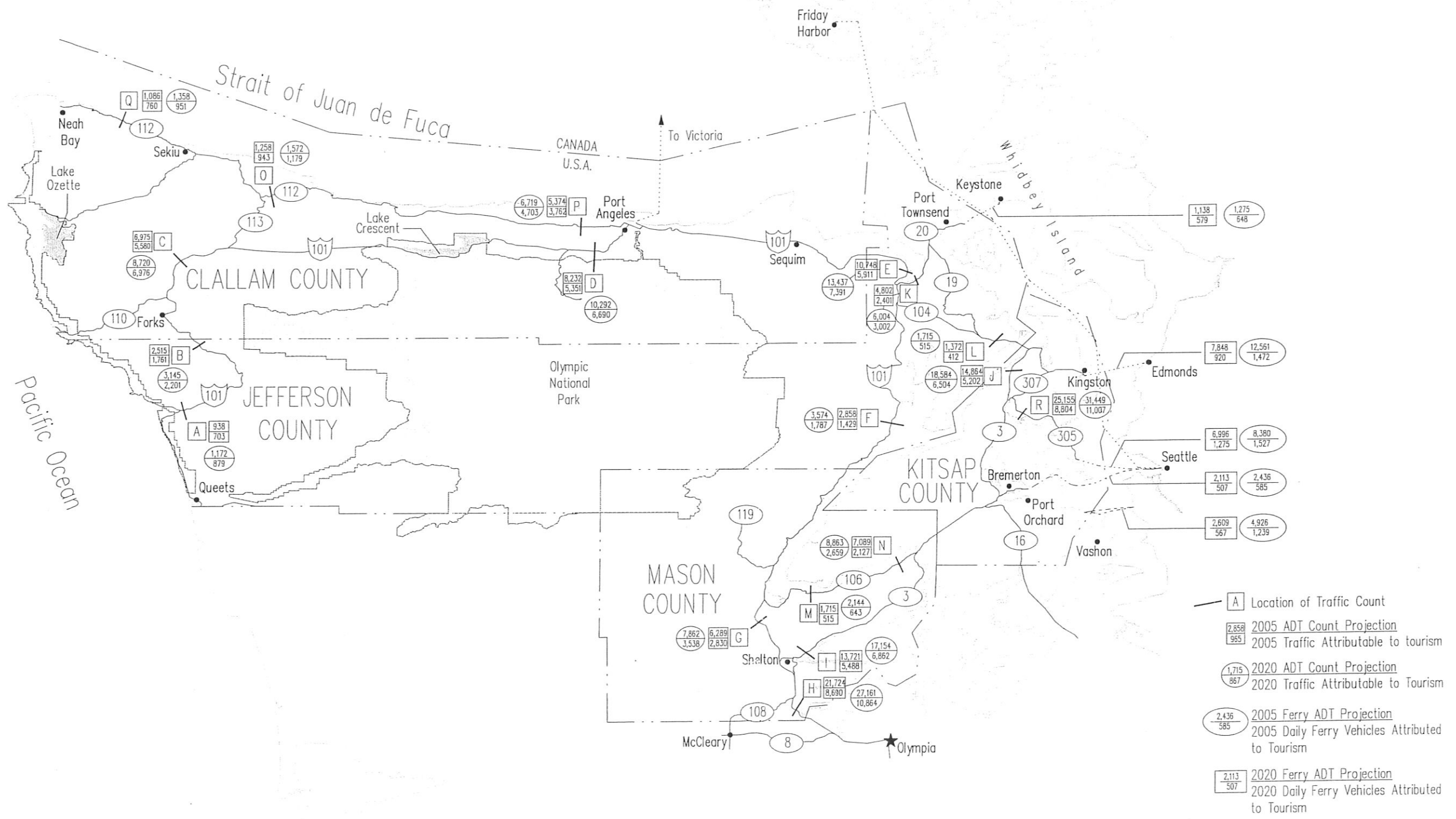
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Figure 7.16:
Projected Traffic
on Roadways &
Ferry Routes



To make specific transportation recommendations, transportation professionals must first understand the reasons behind variations in traffic volumes. This facilitates transportation planning and project development. The trip purpose and trip timing analysis indicates that the PRTPO Region experiences wide variations in both traffic and tourist growth.

A review of visitor trends shows a wide variation in the number of visitors at the various recreational areas. While there is no dominating trend, a rough geographical east/west split does exist. Over the past 20 years, only four recreational sites have experienced a decrease in the number of overall visitors: Sequim Recreational Area, Dosewallips Recreational Area, Bogachiel Recreational Area, and Hoodspport Subarea. Sequim, Dosewallips, and Hoodspport are located on the east side of the Peninsula. In the more recent past (1995-1999), visitor counts at the recreational areas on the northern half of the Peninsula have decreased while visitors to the recreational areas located in the southern half of the Peninsula have increased slightly. Several potential reasons exist for the discrepancy between recreational visits and traffic flow including:

- Decreased recreational visits to the northern and western side of the Olympic Peninsula may possibly be due to increased mudslides and road closures in and around the *Olympic National Park* and along the Hood Canal;
- A portion of the increased recreational visits to the western side of the Olympic Peninsula may possibly be due to recreational travelers seeking more remote areas as the eastern side develops;
- The overall increase in recreational visits to the Olympic Peninsula may be attributed to the pro-active marketing efforts of the area's tourist industry;

There are other recently identified economic issues on the Olympic Peninsula that may have significant far-reaching impacts on tourist travel. The closure of salmon fishing may cause a decrease in sport fishing related travel along the coastline. Those recreational trips, however, may be redirected towards other activities and destinations.

The introduction of Native American gambling concessions has likely increased tourist-related traffic on regional routes servicing those establishments. The specific impacts of the salmon fishing closure and the construction of new casinos are not yet completely identified and must, therefore, be included in future studies and plan updates.

Recommendations

Understanding recreational travel on the Olympic Peninsula is an important component for developing an assessment of transportation needs. Recreational travel influences roadway capacity and design and the identification of future transportation corridors.

Reviewing the list of capacity improvements shown in Chapter 5 (Figures 5.3a-k) and reproduced in Figure 7.17, necessary capacity improvements correspond with increases in tourist travel in the Region. The reconstruction of roadways, construction of passing lanes/climbing lanes, and roadway widening/adding of lanes are all located on high tourist travel corridors. These improvements will benefit residents and visitors to the Region alike.

Although a methodology to calculate the impact of tourist traffic on state routes was developed and contained in this Chapter, very little specific information regarding recreational travel exists. As the need arises to determine impacts of tourism to specific attractions, further study will be needed including site specific studies (studies relating to specific intersections, roadway segments, roadway corridors, etc.).

Conclusions

This chapter reviews both recreational activity and traffic volumes in the PRTPO area. Overall, traffic and tourism is increasing in the area. Traffic impacts related to recent salmon fishing closures and the construction of new gambling casinos will have significant (but yet unknown) traffic impacts on the regional system. The construction of the proposed roadway improvements (detailed in Chapter 5) will aid in providing sufficient transportation infrastructure to accommodate both residents and tourists alike.

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Organization
Tourism Chapter

Figure 7.17:
Proposed Roadway
Capacity
Improvements

